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EXAMINER

BRASE, SANDRA L

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 20040405

Application Number: 09/924,494
Filing Date: August 09, 2001
Appellant(s): MACHIDA ET AL.

MAILED

APR 20 2004

GROUP 2800

Deborah S. Gladstein
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/5/04.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-5 and 21-23 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7). Also, appellant's brief state that claims 1-5 and 21-23 stand or fall together.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

5,436,701	Shimojo et al.	07-1995
5,571,653	Kasuya et al.	11-1996
5,875,379	Machida et al.	02-1999

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida et al. (US 5,875,379) in view of Kasuya et al. (US 5,571,653).

Machida et al. (...379) disclose a developing device comprising: a developer carrying member (11) having a rubber hardness of 20 to 70 degrees (abstract; col. 2, lines 40-57; col. 3, lines 50-55; col. 8., lines 29-39; and col. 8, lines 51-60), an elongation of 400 to 1200 % (abstract; col. 2, lines 40-57; col. 3, lines 50-55; col. 8., lines 29-39; and col. 8, lines 51-60), and a volume electrical resistance of 10^3 to 10^{15} Ω cm at its surface (col. 4, lines 57-61); a storage portion (figure 4) for storing a toner (2) to be supplied to the developer carrying member; and a regulating member (16) disposed in contacting relation with the surface of the developer carrying member for regulating the amount of toner carried on the developer carrying member (col. 8, lines 40-44). The developer carrying member comprises a metallic roller and a surface layer laid over an outer periphery of the roller (figure 4). However, Machida et al. (...379) do not disclose the claimed type of toner. Kasuya et al. (...653) disclose a toner used in a developing device containing an organic aromatic solvent and a vinyl monomer in combined concentrations of not

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more than 1,000 ppm (abstract; col. 2, line 50 – col. 3, line 15; col. 9, line 29-36; and Table 2), where it is preferable that the combined concentrations be made not more than 700 ppm, and more preferably not more than 300 ppm (col. 9, lines 29-36). The toner has an average particle size of 8.1 or 8.2 μm (Table 1) in which the toner particles 4 μm or less in size are present in concentrations of 14.0, 14.2 or 14.5% in terms of percentage of particle count (Table 1), hence toner particles of 3 μm or less in size are present in concentrations equal to or less than 14.0, 14.2 or 14.5% in terms of percentage of particle count. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the claimed type of toner in the developing device, as disclosed by Kasuya et al. (...653) since such a toner is well known in the art for use with a developing device to develop latent images and this type of toner has good fixing efficiency such that the toner does not stick to a fixing member during image fixation.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Machida et al. (US 5,875,379) in view of Kasuya et al. (US 5,571,653) as applied to claim 1 above, and further in view of Shimojo et al. (US 5,436,701).

Machida et al. (...379 in view of Kasuya et al. (...653) disclose the features mentioned previously, and Kasuya et al. (...653) disclose the toner contains a binder resin (abstract); however, they do not disclose performing vacuum drying. Shimojo et al. (...701) disclose a toner containing a binder resin (abstract), and vacuum drying is performed for preparing the binder resin (col. 13, lines 41-60). It would have been obvious to one of ordinary skill in the art at the time of the invention to perform vacuum drying, as disclosed by Shimojo et al. (...701) so as to remove a solvent.

(11) Response to Argument

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine the references is that Kasuya et al. (US 5,571,653) disclose a toner that is made so that it is capable of developing electrostatic images, and such a toner demonstrates good fixing efficiency such that toner does not stick to a fixing member during image fixation. The developing device in Machida et al. (US 5,875,379) is implemented to develop an electrostatic latent image by the use of a toner to ultimately form a printed image. Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the toner composition of Kasuya et al. (...653) in the developing device of Machida et al. (...379) for the development of electrostatic latent images since the toner composition is well known in the art, as disclosed by Kasuya et al. (...653), to be capable of developing electrostatic latent images, where such a toner also demonstrates good fixing efficiency. Furthermore, the developing device of Machida et al. (...379) consumes toner as it supplies toner to an electrostatic latent image, thus toner needs to be refilled into the developing device, where Machida et al. (...379) is silent as to the specific type of toner used. Kasuya et al. (...653) disclose a toner that is made to be used in a developing device so as to develop electrostatic

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latent images. Therefore, it would have been obvious to one of ordinary skill in the art to use the toner as disclosed by Kasuya et al. (...653) for its designated purpose, that being as a toner in a developing device to develop electrostatic latent images into toner images and to ultimately form printed images, where the images formed will be of good quality due to the fixing property of the toner, such that the toner will not stick to a fixing member during fixation.

Appellant also argues that the references Machida et al. (...379) and Kasuya et al. (...653) teach away from each other. However, these references do not teach away from each other and appellant's reasoning of this assertion is flawed. Machida et al. (...379) pertains to a developing device in a copying machine or a printer that develops an electrostatic latent image. The Examiner agrees with appellant that the developer carrying member of the developing device of Machida et al. (...379) has the specified hardness, elongation and resistance so that when the regulating member is pressed against the surface thereof, the toner is prevented from cracking, and the developer carrying member of appellant's developing device has the specified hardness, elongation and resistance for the same reason, that being, preventing toner from cracking when a regulating member is pressed against the surface thereof (see appellant's specification page 20, line 21 – page 21, line 4).

The Examiner also agrees with appellant that the toner disclosed in Kasuya et al. (...653) achieves good fixing efficiency, especially in heat fixation, so that the toner does not adhere to the fixing device, but adheres to a sheet. This fixing property of the toner does not make it unlikely or nonobvious that it would be used for its intended purpose, which is to be used in a developing device to develop electrostatic latent images. However, Machida et al. (...379) disclose the use of its developing device in a copier or printer, but do not specifically teach a

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fixing unit. In a copier or electrostatic printer, a latent image is formed onto a photosensitive member, the photosensitive member rotates so as to bring the latent image into a developing position in which a toner is supplied by a developer carrying member of a developing device to develop the latent image into a toner image, the toner image is then rotated by the movement of the photosensitive member to a transfer position so as to transfer the toner image onto a sheet, where the sheet is fed to a fixing device so as to adhere the toner image onto the surface of the sheet, and finally the sheet is discharged from the copier or electrostatic printer. Thus, even though Machida et al. (...379) is silent as to the mechanism that fixes the toner image to a sheet, a fixing device is an integral component of a copier and an electrostatic printer in which the developing device of Machida et al. (...379) is used. Moreover, heat fixation is the type of fixing that is generally used in the art, which can be illustrated by the number of patents classified in the U.S. class 399 pertaining specifically to heat fixation as opposed to pressure fixation and fixing with a solvent. U.S. class 399, subclasses 328-338 pertain to heat fixation, and at the time of this Examiner's Answer, contain 1, 376 patents, where the subclass pertaining to pressure fixation, which is U.S. class 399, subclass 339, contains 92 patents, and the subclass pertaining to solvent fixation, which is U.S. class 399, subclass 340, contains 24 patents. Consequently, Machida et al. (...379) and Kasuya et al. (...653) do not teach away from each other.

Appellant further argues that the ppm range of the organic aromatic solvent and a vinyl monomer contained in the toner of Kasuya et al. (...653) is broader than the claimed range. While this is true, this does not make it nonobvious. It has been established that in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art a prima facie case of obviousness exists (M.P.E.P. 2144.05). In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA

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1976) and *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Also, a prior art reference that discloses a range encompassing a somewhat narrower range is sufficient to establish a prima facie case of obviousness (see M.P.E.P. 2144.05). *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). In this case, claim 1 claims a toner containing an organic aromatic solvent and vinyl monomer in a range not more than 500 ppm. Kasuya et al. (...653) disclose a toner that contains the organic aromatic solvent and the vinyl monomer in the range of not more than 1,000 ppm (abstract; col. 2, line 50 – col. 3, line 15; col. 9, line 29-36; and Table 2), where Kasuya et al. (...653) disclose that this range is preferably not more than 700 ppm, and still more preferably not more than 300 ppm (col. 9, lines 32-36). Kasuya et al. (...653) further lists examples of toner in Table 2, where examples 1, 2, 4 and 5 contain an organic aromatic solvent and vinyl monomer under 500 ppm. As a result, Kasuya et al. (...653) disclose a toner containing an organic aromatic solvent and vinyl monomer in combined concentrations in the claimed range.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully Submitted



Sandra Brase
Primary Examiner

Conferees:

Arthur Grimley 

Olik Chaudhuri 